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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,117	10/17/2001	Robert E. Haines	10003225-1	5546

7590 01/12/2006
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EXAMINER

DIVINE, LUCAS

ART UNIT PAPER NUMBER

2624

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/981,117

Applicant(s)

HAINES ET AL.

Examiner

Lucas Divine

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/13/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 19-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12 is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-17 and 19-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Claims 1 – 17 and 19 – 23 are pending.

Response to Arguments

2. Applicant's arguments filed 10/13/05 have been fully considered but they are not persuasive.

With respect to applicant's arguments regarding the title.

In reply, Examiner asserts that the title is not 'as specific as possible' see 37 CFR 1.72 and MPEP §606. Also since the field of image forming devices is so large, the current title does not hold informative value in indexing, classifying, searching, etc – see MPEP §606.01. If Applicant would like an Examiner suggestion for a more specific title, one can be provided. Thus the objection is maintained.

With respect to applicant's arguments on pages 12 and 13 against the combination of Siwinski and Mulay.

In reply, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Also, Matthews is specifically relied upon only for the teachings of sending a error message to a user identifying the media that is causing troubles (Fig. 2; p 22). Since Siwinski

Art Unit: 2624

teaches automatically providing error messages, the combination thus teaches automatically providing error messages with type and brand information. For example, if a user puts in a certain brand (Y) of paper that is known to cause paper jams, the combined system would let the user know. It doesn't matter how many trays there are in the system. Paper jams are common errors in printing systems and letting the user know what brand and type of paper are causing them would have been obvious in order to prevent future jams. Other errors caused by that media can also be notified to the user to not use that brand.

3. Applicant's arguments with respect to claims 1 and 8 have been considered but are moot in view of the new ground(s) of rejection necessitated by the amendment. Examiner also notes that the reference provided in support of claim 8 in the current rejection was found in an instant (see search history) and Fig. 16 unquestionably demonstrates a message comprising an order to assist with replenishment of the media. Thus Examiner submits that the Official Notice taken in non-final action dated 7/13/05 was proper.

4. Applicant's arguments with respect to the combinations of Siwinski in view of Mulay and in view of Matthews and their motivations to combine all three as they all apply to claim 12 have been fully considered and are persuasive. The 103 rejection of claim 12 has been withdrawn.

Specification

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

Art Unit: 2624

6. Claim 19 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 19 is not correct as to the markings and what was previously submitted as claim 19, further, the new claim 19 does not further limit claim 13.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 21 and 22 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 21 and 22 introduce new matter in that the applicant's originally filed specification provides no support for 'monitor an ambient condition external of the housing'.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1 – 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siwinski et al. (US 2002/0015066) and Kawabata et al. (US 5905925).

Regarding claim 1, Siwinski teaches **an image forming device (10) comprising:**

a housing (The housing of printer 10, Fig. 1) **including a media path arranged to guide media** (media 24 [p 33] is guided from tray 20 to imaging drum 26 for printing [p 37]);

a first sensor (50 with antenna 56h, Fig. 2) **configured to obtain encoded data from the media** (data of media characteristic [type of media or other info, p 49] is sensed from transponder [54h] on receiver media; abstract lines 2-4; Fig. 2; p 12; p 19 teaches other encoded data that can be obtained; TABLE 3 [page 6]) **and to output a first signal indicative of the encoded data** (Fig. 2 shows antenna 56h outputting data through 58 and sensor 50 to processor 32);

imaging circuitry (32 Fig. 2) **configured to form hard images upon the media** (Figs. 1 and 2 show the printer that processor 32 controls to print), **to receive the signal** (signal sent along transmission paths shown in Fig. 2 from transceivers 50 to processor 32) **and to perform at least one function with respect to the formation of the hard images within the image forming device responsive to the encoded data indicated within the signal** (p 15, p 63).

Siwinski does not specifically teach a second ambient condition sensor or printing based on the signal therefrom.

Kawabata teaches **a second sensor** (e.g. 27, 28 Fig. 2, see also Fig. 5) **configured to monitor an ambient condition** (temperature, humidity) **within an environment in which the image forming device is deployed** (Fig. 5 describes the conditions as environment conditions) **and to output a second signal indicative of the ambient condition** (in order to correct

Art Unit: 2624

conditions for printing in col. 11 lines 1-4 a signal must be sent from sensors 27, 28 to 23 via lines shown in Fig. 2) and adjusting the formation of hard images responsive to the signal of the second sensor (based on the ambient conditions, the output voltage changes on the printing device, see Fig. 5 – control means 23 is the imaging circuitry, col. 11 lines 1-21)

Kawabata teaches using not only the media type, but also the ambient conditions *to most correctly print out a print job* (3B, e.g. col. 1 lines 7-13, col. 2 lines 64-65, see further throughout). Thus based on this clear motivation taught in the art it would have been obvious to one of ordinary skill in the art to include the second sensor functions of Kawabata in the media type detecting and printing system of Siwinski.

Regarding claim 2, which depends from claim 1, Siwinski teaches **the first sensor is configured to obtain the encoded data from the media comprising a plurality of discrete sheets** (24, Fig. 2, p 56).

Regarding claim 3, which depends from claim 1, Siwinski teaches **the imaging circuitry is configured to form the hard images upon the media according to an imaging parameter and to perform the at least one function comprising adjusting the imaging parameter** (p 4, wherein adjusting printer functions based on imaging parameters is specifically suggested by Siwinski; p 63). Kawabata also teaches imaging parameters in col. 11 lines 1-21, Fig. 4, col. 10 lines 23-15).

Regarding claim 4, which depends from claim 3, Kawabata teaches **the imaging circuitry is configured to adjust the imaging parameter responsive to the second signal from the second sensor** (col. 11 lines 1-21).

Regarding claim 5, which depends from claim 3, while Siwinski teaches running a stored program controlling printing that uses saved initial variables (p 63 – initial settings placed into storage when a media type first loaded [p 64]), Siwinski does not specifically teach **an interface configured to receive updated settings and wherein the storage circuitry is configured to store the updated settings to replace the initial settings.**

Kawabata teaches **an interface (Fig. 3B) configured to receive updated settings** (characteristic input in the lower right is a button to select to update the settings for any of the media types) **and wherein the storage circuitry is configured to store the updated settings to replace the initial settings** (col. 3 lines 10-20; col. 9 lines 50-51; col. 9 line 66 – col. 1 line 2; col. 10 lines 40-42).

It would have been obvious to one of ordinary skill in the art to allow the user to update imaging parameters for different media types in the system of Siwinski. The motivation for doing so would have been to have the most precise up-to-date imaging parameters. Since many factors and conditions can change in media, printers, and printer elements, if any of these change significantly for any reason, it might be appropriate to adjust imaging parameters to keep the output of the printer optimal. Further, Siwinski teaches that data can be written onto media as encoded data (p 17) and that if the media is taken to another device, the new updated settings could go with it (p 22). This would be another advantage of updating the printing characteristics of the type of media.

Regarding claim 11, which depends from claim 1, Siwinski teaches **the imaging circuitry is configured to print hard images upon media** (p 1, p 37).

Art Unit: 2624

9. Claims 6, 7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siwinski as applied to claims 1 and 13 above, and further in view of Matthews et al. (US 2002/0097422).

Regarding claim 6, which depends from claim 1, while Siwinski teaches displaying printer messages (p 37, specifically discussed are maintenance and error messages) to control console 30 through the interface (see line in Fig. 2 between 30 and 32) external of the printer, Siwinski does not specifically teach that the message identifies the media.

Matthews teaches sending a error message to a user identifying the media that is causing troubles (Fig. 2; p 22).

It would have been obvious to one of ordinary skill in the art that one of the error type messages in the system of Siwinski could have been identifying which media is causing jams as shown in Matthews. The motivation for doing so would have been to prevent errors that are caused by that specific media.

Regarding claim 7, which depends from claim 6, the combination of Siwinski (teaches type) and Matthews (teaches brand) could display both in the error message.

Regarding claim 10, which depends from claim 1, while Siwinski teaches a media supply (tray 20) that can have the receiving transceiver antenna 56h on it (p 38, 15) and media that individually has encoded data (Fig. 2, 24), Siwinski does not specifically teach that there are multiple trays with multiple sensor antennas.

Matthews teaches a printer with multiple trays (p 14) that supply different types of media to the printer.

It would have been obvious to one of ordinary skill in the art that multiple trays would be beneficial in the system of Siwinski in order to provide different types of media at the same time. Thus, a user would not have to switch out types of media when they want to use a different type. Further, sensing information including media type is an object of Siwinski, so in a system with multiple trays and media types, it would be obvious to have an additional sensor in each tray to report to the system what type of media is being printed on.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Siwinski and Matthews as applied to claims 6 and 1 above, and further in view of Arima (US 6714744).

Regarding claim 8, which depends from claim 6, while Siwinski teaches monitoring usage of consumables including print media and notifying a user of errors, Siwinski does not specifically teach the notification to be an order to assist with replenishment of the media.

However, Arima teaches notifying a user when a media consumable has run out or is low for the user to place an order for more to replenish the supply (Figs. 4, 5, 9, 16).

It would have been obvious to one of ordinary skill in the art to send the user a message to order more of a media consumable that has run out or is running low in order to provide for prevention of time when the printer cannot be used because the supplies are out.

11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Siwinski as applied to claim 1 above, and further in view of Matsuno et al. (US 6069641).

Regarding claim 9, which depends from claim 1, Siwinski teaches the idea that if a consumable is not compatible for some reason to temporarily disable printer operations (p 24).

Art Unit: 2624

Siwinski does not specifically teach the prevention of printing is one of the functions related to the encoded data read by the sensor [type of media for example].

However, Matsuno teaches that some printing systems or tasks require specific types of media and preventing use of the wrong type of media (col. 3 lines 42-48) and stopping the recording of information onto the media in response.

It would have been obvious to one of ordinary skill in the art to prevent imaging on types of media that would be detrimental to a task in order to produce optimal print results. Thus in the combined system, the detected media type could be used to make sure that the media is the correct media for the current printer or task.

12. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Siwinski and Kawabata as applied to claim 1 above, and further in view of Gonnella, Jr. et al. (US 6577825).

Regarding claim 21, which depends from claim 1, the combination of Siwinski and Kawabata do not specifically teach the second sensor to be monitoring an ambient condition external of the housing.

However, Gonnella teaches that a sensor can be used to detect an ambient condition external of the housing and use the signal from the sensor with respect to the formation of images (abstract, steps 254-258, col. 2 lines 26-40, col. 4 line 57 – col. 5 line 7, wherein the environmental sensor senses a user outside of the device in order to initiate a warm-up function).

It would have been obvious to one of ordinary skill in the art to include an environmental sensor such as that of Gonnella in the combination of Siwinski and Kawabata. The motivations

for doing so would have been to provide an effective and useful stand-by/wake-up feature for the device to save power and also warm up promptly when a user wants to use the device.

13. Claims 13 – 15, 19, 20, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siwinski in view of Matthews.

Regarding claims 13 and 19, Siwinski teaches a **method of forming hard images comprising:**

moving media along a media path of an image forming device (media 24 [p 33] is guided from tray 20 to imaging drum 26 for printing [p 37]);

forming hard images upon the media using the image forming device (p 15, p 63 – Figs. 1 and 2 show the printer that processor 32 controls to print);

retrieving encoded data from the media using the image forming device (data of media characteristic [type of media or other info, p 49] is sensed from transponder [54h] on receiver media; abstract lines 2-4; Fig. 2; p 12; p 19 teaches other encoded data that can be obtained; TABLE 3 [page 6] - Fig. 2 shows antenna 56h outputting data through 58 and sensor 50 to processor 32 – received along transmission paths shown in Fig. 2);

performing at least one function with respect to the media using the image forming device responsive to the encoded data (one function e.g. p 15, p 63).

While Siwinski teaches displaying printer messages (p 37, specifically discussed are maintenance and error messages) to control console 30 through the interface (see line in Fig. 2 between 30 and 32) external of the printer, Siwinski does not specifically teach that the message identifies the media.

Matthews teaches sending a error message to a user identifying the media that is causing troubles (Fig. 2; p 22).

It would have been obvious to one of ordinary skill in the art that one of the error type messages in the system of Siwinski could have been identifying which media is causing jams as shown in Matthews. The motivation for doing so would have been to prevent errors that are caused by that specific media.

Regarding claims 14, 15, and 20, which depend from claim 13, Siwinski teaches the limitations of claims 14, 15, and 20 as discussed in the rejection of claims 2, 3, and 11, respectively.

Regarding claim 23, which depends from claim 13, since Siwinski teaches automatically displaying error and maintenance messages (p37), the combination thus can automatically communicate error messages without user input.

14. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siwinski and Matthews as applied to claims 13 and 15 above, and further in view of Kawabata.

Regarding claim 16, which depends from claim 15, Siwinski does not specifically teach a second ambient condition sensor or printing based on the signal therefrom.

Kawabata teaches a second sensor (e.g. 27, 28 Fig. 2, see also Fig. 5) configured to monitor an ambient condition (temperature, humidity) within an environment in which the image forming device is deployed (Fig. 5 describes the conditions as environment conditions) and to output a second signal indicative of the ambient condition (in order to correct conditions for printing in col. 11 lines 1-4 a signal must be sent from sensors 27, 28 to 23 via lines shown in

Art Unit: 2624

Fig. 2) and adjusting the formation of hard images responsive to the signal of the second sensor (based on the ambient conditions, the output voltage changes on the printing device, see Fig. 5 – control means 23 is the imaging circuitry, col. 11 lines 1-21)

Kawabata teaches using not only the media type, but also the ambient conditions *to most correctly print out a print job* (3B, e.g. col. 1 lines 7-13, col. 2 lines 64-65, see further throughout). Thus based on this clear motivation taught in the art it would have been obvious to one of ordinary skill in the art to include the second sensor functions of Kawabata in the media type detecting and printing system of Siwinski.

Regarding claim 17, which depends from claim 15, while Siwinski teaches running a stored program controlling printing that uses saved initial variables (p 63 – initial settings placed into storage when a media type first loaded [p 64]), Siwinski does not specifically teach an interface configured to receive updated settings and wherein the storage circuitry is configured to store the updated settings to replace the initial settings.

Kawabata teaches an interface (Fig. 3B) configured to receive updated settings (characteristic input in the lower right is a button to select to update the settings for any of the media types) and wherein the storage circuitry is configured to store the updated settings to replace the initial settings (col. 3 lines 10-20; col. 9 lines 50-51; col. 9 line 66 – col. 1 line 2; col. 10 lines 40-42).

It would have been obvious to one of ordinary skill in the art to allow the user to update imaging parameters for different media types in the system of Siwinski. The motivation for doing so would have been to have the most precise up-to-date imaging parameters. Since many factors and conditions can change in media, printers, and printer elements, if any of these change

Art Unit: 2624

significantly for any reason, it might be appropriate to adjust imaging parameters to keep the output of the printer optimal. Further, Siwinski teaches that data can be written onto media as encoded data (p 17) and that if the media is taken to another device, the new updated settings could go with it (p 22). This would be another advantage of updating the printing characteristics of the type of media.

15. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Siwinski and Matthews as applied to claim 13 above, and further in view of Gonnella.

Regarding claim 22, which depends from claim 13, the combination of Siwinski and Matthews do not specifically teach another sensor to be monitoring an ambient condition external of the housing.

However, Gonnella teaches that a sensor can be used to detect an ambient condition external of the housing and use the signal from the sensor with respect to the media (abstract, steps 254-258, col. 2 lines 26-40, col. 4 line 57 – col. 5 line 7, wherein the environmental sensor senses a user outside of the device in order to initiate a warm-up function – also wherein in the wake-up process, sensor 116 [col. 5 lines 26-45] is one of the items woken up responsive to the monitoring and the sensor operates with respect to the media in the paper feeder).

It would have been obvious to one of ordinary skill in the art to include an environmental sensor such as that of Gonnella in the combination of Siwinski and Kawabata. The motivations for doing so would have been to provide an effective and useful stand-by/wake-up feature for the device to save power and also warm up promptly when a user wants to use the device.

Allowable Subject Matter

16. Claim 12 is allowed.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sommer et al. (2002/0051182) teaches recording material management in a copier or printer.

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lucas Divine whose telephone number is 571-272-7432. The examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm.

Art Unit: 2624

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on 571-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lucas Divine
Examiner
Art Unit 2624

ljd



KING Y. POON
PRIMARY EXAMINER